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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,147	12/15/2003	Chang Hyuk Lee	40296-0060	9314

26633 7590 09/06/2005

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EXAMINER

LUU, PHO M

ART UNIT PAPER NUMBER

2824

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/734,147	<b>Applicant(s)</b> LEE, CHANG HYUK	
	<b>Examiner</b> Pho M. Luu	<b>Art Unit</b> 2824	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/16/05</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Search History</u> .                   |

### **DETAILED ACTION**

1. The update states related to the copending application Serial No. 10/738,087 filed December 18, 2003 on page 1 of the specification now U. S. Patent Number 6,920,073.
2. Claims 1-8 are pending in the application.
3. This office action acknowledges receipt of the following items from the Applicant:  
The Specification, Claims, Abstract, Drawing and Oath or Declaration filed on 15 December 2003.

### ***Priority***

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

5. Acknowledgment is made of applicant's Information Disclosure Statement (IDS) Form PTO-1449, filed 16 March 2005. The information disclosed therein was considered.

### ***Specification***

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

7. The abstract of the disclosure is objected to because it uses the phrase "**comprises**" in line 3, which is implied. Correction is required. See MPEP § 608.01(b).

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Drawings***

9. Figure 1 should be designated by a legend such as **--Prior Art--** because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction

or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Double Patenting***

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1-4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1-4 of U.S. Patent No. 6,920,073 in view of Nagase (US. 5,373,475).

Regarding claims 1-4 of the instant application, claims 1-4 of Patent "073 recited a row redundancy circuit comprising:

a fuse box group array comprising a plurality of fuse box groups including at least two or more fuse boxes to detect whether repaired row addresses are applied;

a redundant row predecoder for performing a logic operation on an output signal from the fuse box groups to selectively activated redundant main wordlines each of which corresponds to a plurality of redundant sub-wordlines and

a redundant sub-row decoder for classifying the output signals from the fuse box groups into group signals corresponding to the number of fuse boxes in each fuse box group and performing a logic operation on the group signals to output a boosting signal for selectively activating the plurality of sub-wordline corresponding to the each redundant main wordline (claim 1 of Patent "073);

the row redundancy circuit wherein the redundant row predecoder selectively activates the redundant main wordline when one of fuse boxes in the fuse box group corresponding to the redundant main wordlines is enable (claim 2 of Patent "073);

the row redundancy circuit wherein each fuse box group corresponds to one of the redundant main wordlines and one of the redundant main wordlines corresponds to  $4 \times N$  redundant sub-wordline (claim 3 of Patent "073);

the row redundancy circuit wherein the redundant row predecoder activates a corresponding cell array block when the redundant main wordline is activated and output a boosting control signal for controlling the boosting signal into the redundant sub-row decoder (claim 4 of Patent "073).

However, claims 1-4 of Patent "073 do not recite the boosting circuit signal is disable only when a new row address is applied.

Nagase, for example, in Figure 3 discloses the boosting circuit (BC, Fig. 3) signal is disable (boost circuit BC set both or either of open/close control signal o10A, o10B, see column 6, lines 16-19) only when a new row address is apply (address signal RA<sub>0</sub>-RA<sub>8</sub> input to first/second row decoder RD1, RD2 generate the output to memory cell array MCA of each block BK1, BK2) (see column 5, lines 53-66 and see column 6, lines 10-19).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the boosting circuit set at open and closed for controlling signal of Nagase in the device of Patent "073 using boosting circuit for the purpose of providing the controlling signal at an active level in response to row address signal. (for example of Nagase, see column 5, line 62-65 and column 6, lines 16-19).

#### ***Allowable Subject Matter***

12. Claims 5-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 5, the prior art of record do not disclose or suggest a redundant sub-row decoder disables the boosting signal in response to a signal obtained by predecoding lower 3 bits of the new row address in the row redundancy circuit.

***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Pho M. Luu whose telephone number is 571.272.1876. The examiner can normally be reached on M-F 8:00AM – 5:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Richard Elms, can be reached on 571.272.1869. The official fax number for the organization where this application or proceeding is assigned is 703.872.9306 for all official communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PL

PML  
23 August 2005



Pho M. Luu  
Art Unit 2824